



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,236	01/28/2004	Shaun Kazuo Wakumoto	200313910-1	4767
22879	7590	12/21/2007		
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER WONG, BLANCHE	
			ART UNIT 2619	PAPER NUMBER
			NOTIFICATION DATE 12/21/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM  
mkraft@hp.com  
ipa.mail@hp.com

<b>Office Action Summary</b>	Application No. 10/767,236	Applicant(s) WAKUMOTO ET AL.	
	Examiner Blanche Wong	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2007.  
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-18 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 4-7, 9 and 10 is/are allowed.  
 6) ☒ Claim(s) 1-3, 8, 11-14 and 16-18 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see Amendment and Response to Office Action, filed October 9, 2007, with respect to the rejection(s) of claim(s) 1 under 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Miller et al. (U.S. Pat No. 6,247,058).

2. Applicant's arguments, see Amendment and Response to Office Action, filed October 9, 2007, with respect to claim 11 have been fully considered and are persuasive. The 103 rejection of claim 11 has been withdrawn.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the step of "the packet is forwarded outside the network of switches by removing the broadcast path tag from the packet" (claim 1) and the modified layer 2 MAC table (claim 11) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

### ***Claim Objections***

4. Claims 1 and 11 are objected to because of the following informalities:

With regard to claim 1, Examiner suggests removing the parentheses because limitations within parentheses are not considered part of the claim.

With regard to claim 1, Examiner suggests removing the extra period at the end of the claim language.

With regard to claim 11, Examiner suggests spelling out MAC when used for the first time.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 11-14 and 16-18** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 11, it is unclear what is "a *modified* layer 2 MAC table" (with emphasis) in line 8 e.g. as oppose to a layer 2 MAC table.

***Claim Rejections - 35 USC § 103***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. **Claim 1** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada (US 2003/0108069) in view of Miller et al. (U.S. Pat No. 6,247,058).

With regard to claim 1, Yamada discloses **(extended header terminator 10 in Fig. 1)**

receiving a packet (**71a\_1 in Fig. 2, para. [0101]**) to broadcast through the network of switches;

selecting a broadcast path (**a remote address table 12a and port identifier PortID, para. [0013]**) from a plurality of generated broadcast paths;

creating a broadcast path tag (**tag generator 11a, para. [0113]**) associated with the selected broadcast path;

inserting (**adds**) the broadcast path tag (**Tag\_a, para. [0113]**) (*See A/so "... adds the 'port identifier PortID' to the packet 71a\_1", para. [0113] and "... adds to the packet 70a\_1 the 'broadcast identifier BID'", para. [0115]*) into the packet;

determining port(s) (**port identifier PortID, para. [0013]**) by which to forward the packet; and

transmitting the packet (**tag generator 11a, para. [0113]**), with the broadcast path tag embedded therein, via the port(s) (**port identifier PortID, para. [0013]**) to next switch(es) (**switch 300 in Fig. 1**) in accordance with the selected broad path.

Yamada does not disclose wherein the packet is forwarded outside the network of switches by removing the broadcast path tag from the packet and broadcasting the packet with the broadcast path tag removed outside of the network of switches.

Miller discloses removing the broadcast path tag from the packet (**step 176 in Fig. 8**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine removing the broadcast path tag from the packet as taught in Miller with Yamada to recycle the broadcast path tag.

9. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada and Miller as applied to claim 1 above, and further in view of admitted prior art Fig. 2.

With regard to claim 2, the combination of Yamada and Miller discloses the method of claim 1.

The combination does not disclose a spanning tree and an owner switch at a root of a spanning tree.

Fig. 2 discloses a spanning tree (**p.7, para. 2**) and an owner switch at a root of a spanning tree (**a spanning tree where the owner switch is at the root of the tree, p.9, para. 2**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine a spanning tree and an owner switch at a root of a spanning tree as taught in Fig. 2, with Yamada and Miller, for the benefit of a spanning tree topology protocol used to discover the existence of redundant communication paths.

10. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada and Miller as applied to claim 1 above.

With regard to claim 3, Yamada discloses the method of claim 1. Yamada further discloses a tag comprising a code indicating a broadcast (**BID**) and a path identifier (**PortID**) (port identifier **PortID**' to the packet 71a\_1", para. [0113] and "... adds to the packet 70a\_1 the 'broadcast identifier **BID**'", para. [0115]).

Yamada does not disclose a source switch identifier in a tag.

However, official notice is taken that the limitation source switch identifier is well-known.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a source switch identifier in a tag to identify the source and to facilitating delivery from source to destination.

11. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada and Miller as applied to claim 1 above, and further in view of Henrion (U.S. Pat NO. 5,461,615).

With regard to claim 8, The combination of Yamada and Miller discloses the method of claim 1.

The combination does not disclose multipath broadcasting in that different broadcast paths are selected to broadcast packets depending on specific criteria.

Henrion discloses different broadcast (**capable of carrying out routing with broadcasting, col. 9, lines 44-45**) paths (**groups of outputs LG1,LG2,LG3 in Fig. 5, col. 9, line 47**) are selected to broadcast packets depending on specific criteria (**an internal routing label**) (“...a cell is supplied to the input LP1 with an internal routing label comprising the identifier A1...”, col. 9, lines 50-51).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine multipath broadcasting in that different broadcast paths are selected to broadcast packets depending on specific criteria as taught in Henrion, with Yamada and Miller, for the benefit of multipath broadcasting.

***Allowable Subject Matter***

12. **Claims 4-7,9,10** are allowed.
13. Claim 11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
14. Claim 12-14 and 16-18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
15. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claim 9, the prior art of record fails to anticipate or make obvious “multipath broadcasting in that different broadcast paths are selected to broadcast packets depending on ... a type of the packet”.



With regard to claim 10, the prior art of record fails to anticipate or make obvious "multipath broadcasting in that different broadcast paths are selected to broadcast packets depending on ... load balancing across the different broadcast paths."

With regard to claim 11, the prior art of record fails to anticipate or make obvious "a layer 2 MAC table which includes a path tag". Wakumoto et al. (Pub No. US2005/0213582) discloses a layer 2 MAC table which includes a path tag (**Layer 2 MAC table 502 with path tags in Fig. 5, para. [0057]**). However, the effective filing date of Wakumoto is later than that of the current application.

### **Conclusion**

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*BW*

BW  
December 11, 2007

EDAN . ORGAD  
SUPERVISORY PATENT EXAMINER

*Edan Orgad*